Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8-9, 11, 13-18, 20-21, 23, 25-28, 30-34, 36-39, & 41 are rejected under 35 U.S.C. 102(e) as

being anticipated by Buckley et al. (US 6,798,530).

Regarding claim 1, Buckley et al., teach a printing system composed of plural printing apparatus **(fig 2,**

printers 300 & 310), a client apparatus **(fig 2, general purpose computer 100)** capable of setting the

print environment and setting the print attribute **(column 6:lines 51-62, client 100 selects the printers**

to use, i.e. sets the environment, and then chooses which objects to print for each printer, i.e. sets

the print attribute), and a server apparatus **(fig2, print server 200)** for causing at least one of the plural

apparatus to execute the printing according to print data from the client apparatus **(column 7:lines 13-20,**

client sends print data to server which causes printer to execute the print job), the system

comprising:

holding means **(fig 2, printer definition memory portion 132)** for holding description information

describing the respective functions of the plural printing apparatus **(column 6:lines 48-50, holding**

means 132 stores the rendering parameter options, i.e. the functions, for each printer);

generation means **(fig 2, client 100 includes a graphical user interface (GUI))** for selecting printing

apparatus based on the print environment set in the client apparatus **(column 6:line 63-column 7:line 3,**

client sets all of the printers to be used as the meta-printer, i.e., client selects the printing

apparatus), and generating description information describing the function of a virtual printing apparatus

composed of the selected printing apparatus, based on the description information held by said holding

means **(column 6:line 63-column 7:line 20, the use of the GUI generates the description**

information of the meta-printer, which is compiled by accessing the printer definitions of all the

printers in the meta-printer, and applying their functions in the meta-printer);

display control means **(fig 2, display device 160)** for displaying an image of the print attribute on a

display unit of the client apparatus, based on the description information generated by said generation

means **(column 5:lines 23-30, device 160 displays the GUI)**;

and control means **(column 7:lines 4-5, printer driver for currently selected meta-printer)** for causing

the printing apparatus constituting the virtual printing apparatus to print the print data from the client

apparatus, based on the print attribute set on said image **(column 7:lines 4-20, print data is formed by**

the print driver using the separate printer functions stored in memory, and is sent to the print

server which distributes the data to the corresponding printers in the meta-printer based on the

assigned print attributes/objects).

Regarding claim 2, Buckley et al., teach a system according to claim 1, wherein:

the description information held by said holding means includes information indicating the type of the

printing apparatus **(fig 5 illustrates description information containing the defined objects type(s) of**

each printer);

said display control means displays an image for setting the type and number of the printing apparatus,

on the display unit of the client apparatus **(fig 6 teaches a GUI that sets the object/content type and**

the printer number);

and said generation means **(fig 2, GUI included on client 100)** selects the printing apparatus based on

the type and number set on the image **(fig 5, fig 6, & column 6:line 63-column 7:line 3, client sets all**

of the printers to be used as the meta-printer by selecting their type and number), and generates

the description information of the virtual printing apparatus based on the description information including

information indicating the set type **(fig 5, fig 6, & column 6:line 63-column 7:line 20, the use of the**

GUI generates the description information of the meta-printer, which is compiled by accessing the

printer definitions of all the printers in the meta-printer, and applying their functions and types in the meta-printer).

Regarding claim 3, Buckley et al., teach a system according to claim 1, wherein:
said display control means displays an image for designating the printing apparatus on the display unit of the client apparatus (fig 6, designation is made with drop down menus that select the printers in the meta-printer);
and said generation means (fig 2, GUI included on client 100) selects the printing apparatus designated on the image (fig 5, fig 6, & column 6:line 63-column 7:line 3, client sets all of the printers to be used as the meta-printer by selecting their type and number), and generates the description information of the virtual printing apparatus based on the description information of the designated printing apparatus (fig 5, fig 6, & column 6:line 63-column 7:line 20, the use of the GUI generates the description information of the meta-printer, which is compiled by accessing the printer definitions of all the printers in the meta-printer, and applying their functions and types in the meta-printer).

Regarding claim 4, Buckley et al., teach a system according to claim 1, further comprising:
input operation means (fig 6, graphical user interface 700) capable of an input operation for renewing the content of the description information of the printing apparatus (fig 6 teaches a drop down menu that allows the user to renew the printer numbers and types in the meta-printer).

Regarding claim 5, Buckley et al., teach a system according to claim 1, wherein:
the description file of the virtual printing apparatus describes the function obtained by combining plural printing apparatus (column 6:line 63-column 7:line 20, the use of the GUI generates the description information of the meta-printer, which is compiled by accessing the printer definitions of all the printers in the meta-printer, and applying their functions in the meta-printer).

Regarding claim 6, Buckley et al., teach a system according to claim 1, wherein:

said generation means determines the number of copies that can be outputted by the virtual printing

apparatus, by adding the numbers of copies that can be respectively outputted by the plural printing

apparatus **(fig 3, GUI includes a "copy count" seting for each printer in the meta-printer. Column**

6:line 63-column 7:line 20, the use of the GUI generates the description information of the meta-

printer, which is compiled by accessing the printer definitions of all the printers in the meta-

printer, and applying their functions to form the meta-printer. When all of the printer functions

(including copy count) are compiled, the total copy count is arrived at for the meta-printer)

Regarding claim 8, Buckley et al., teach a system according to claim 1, wherein:

said generation means determines the kinds of papers that can be processed by the virtual printing

apparatus, by the kinds of papers that can be respectively processed by the plural printing apparatus **(fig**

3, GUI includes "paper size" that denotes the sizes of paper available and in use for each printer

in the meta-printer).

Regarding claim 9, Buckley et al., teach a system according to claim 1, wherein:

said generation means either determines that the virtual printing apparatus has a two-side printing

function in case at least one of the plural printing apparatus has the two-side printing function, or

determines that the virtual printing apparatus has a sheet processing function in case at least one of the

plural printing apparatus has the sheet processing function **(fig 3, GUI includes a "Print of Both**

Sides/Duplex Printing" setting for determining two-sided printing).

Regarding claim 11, Buckley et al., teach a system according to claim 1, wherein:

said control means **(column 7:lines 4-5, print driver for currently selected meta-printer)** judges

whether or not to disperse the print data to plural printing apparatus based on the set print attribute, and

transmits the dispersed print data to the respective printing apparatus **(column 6:lines 51-62, client**

selects which objects, i.e. which print attribute, to print on the selected printer(s). From that point,

column 7:lines 4-20, the control means judges how to disperse the print data that has been

processed for distribution to one or multiple selected printer(s) in the meta-printer).

Claims 13-18, 20-21, & 23 recite identical features as claims 1-6, 8-9, & 11 except claims 13-18, 20-21, &

23 method claims. Thus, arguments similar to that presented above for claims 1-6, 8-9, & 11 are equally

applicable to claims 13-18, 20-21, & 23.

Regarding claims 25-28, Buckley et al., teach a program **(column 9:line 66-column 10:line 3)** that is

representative of method claims 13-15 & 23, respectively.

Regarding claim 30, Buckley et al., teach a program **(column 9:line 66-column 10:line 3)** that executes

in the print system that is representative of method claim 13. Although not specifically mentioned, the

system inherently includes a computer readable memory medium to storing the program, otherwise the

program would not be available for use.

Regarding claim 31, *note: **column 9:line 66-column 10:line 3, teaches that the means below can be***

implemented on the print server 200 instead of the computer 100 and printers 300 & 310. Buckley

et al., teach an information processing apparatus **(fig 2, server 200)** capable of communication with plural

printing apparatus **(fig 2, printers 300 & 310)** and an external apparatus **(fig 2, computer 100)** capable

of generating print data **(column 6:lines 23-31, computer 100 can open files for printing)**, setting print

environment and setting print attribute **(column 6:lines 51-62, client 100 selects the printers to use,**

i.e. sets the environment, and then chooses which objects to print for each printer, i.e. sets the

print attribute), comprising:

holding means **(fig 2, printer definition memory portion 132)** for holding description information

describing the respective functions of the plural printing apparatus **(column 6:lines 48-50, holding**

means 132 stores the rendering parameter options, i.e. the functions, for each printer);

generation means **(fig 2, client 100 includes a graphical user interface (GUI))** for selecting printing

apparatus based on the print environment set in the client apparatus **(column 6:line 63-column 7:line 3,**

client sets all of the printers to be used as the meta-printer, i.e., client selects the printing

apparatus), and generating description information describing the function of a virtual printing apparatus

composed of the selected printing apparatus, based on the description information held by said holding

means **(column 6:line 63-column 7:line 20, the use of the GUI generates the description**

information of the meta-printer, which is compiled by accessing the printer definitions of all the

printers in the meta-printer, and applying their functions in the meta-printer);

and control means **(column 7:lines 4-5, printer driver for currently selected meta-printer)** for causing

the printing apparatus constituting the virtual printing apparatus to print the print data from the client

apparatus, based on the print attribute set on said image **(column 7:lines 4-20, print data is formed by**

the print driver using the separate printer functions stored in memory, and is sent to the print

server which distributes the data to the corresponding printers in the meta-printer based on the

assigned print attributes/objects).

Regarding claim 32, Buckley et al., teach a system according to claim 31, wherein:

the description information held by said holding means includes information indicating the type of the

printing apparatus **(fig 5 illustrates description information containing the defined objects type(s) of**

each printer);

an image for setting the type and number of the printing apparatus, is displayed on the display unit of the

external apparatus **(fig 6 teaches a GUI that sets the object/content type and the printer number)**;

and said generation means **(fig 2, GUI included on client 100)** selects the printing apparatus based on

the type and number set on the image **(fig 5, fig 6, & column 6:line 63-column 7:line 3, client sets all**

of the printers to be used as the meta-printer by selecting their type and number), and generates

the description information of the virtual printing apparatus based on the description information including

information indicating the set type **(fig 5, fig 6, & column 6:line 63-column 7:line 20, the use of the**

GUI generates the description information of the meta-printer, which is compiled by accessing the

printer definitions of all the printers in the meta-printer, and applying their functions and types in

the meta-printer).

Regarding claim 33, Buckley et al., teach a system according to claim 31, wherein:

an image for designating the printing apparatus is displayed on the display unit of the external apparatus

(fig 6, designation is made with drop down menus that select the printers in the meta-printer);

and said generation means (fig 2, GUI included on client 100) selects the printing apparatus

designated on the image (fig 5, fig 6, & column 6:line 63-column 7:line 3, client sets all of the

printers to be used as the meta-printer by selecting their type and number), and generates the

description information of the virtual printing apparatus based on the description information of the

designated printing apparatus (fig 5, fig 6, & column 6:line 63-column 7:line 20, the use of the GUI

generates the description information of the meta-printer, which is compiled by accessing the

printer definitions of all the printers in the meta-printer, and applying their functions and types in

the meta-printer).

Regarding claim 34, Buckley et al., teach a system according to claim 31, wherein:

said control means (column 7:lines 4-5, print driver for currently selected meta-printer) judges

whether or not to disperse the print data to plural printing apparatus based on the set print attribute, and

transmits the dispersed print data to the respective printing apparatus (column 6:lines 51-62, client

selects which objects, i.e. which print attribute, to print on the selected printer(s). From that point,

column 7:lines 4-20, the control means judges how to disperse the print data that has been

processed for distribution to one or multiple selected printer(s) in the meta-printer).

Regarding claims 36-39, Buckley et al., teach a program (column 9:line 66-column 10:line 3) that is

representative of apparatus claims 31-34, respectively.

Regarding claim 41, Buckley et al., teach a program **(column 9:line 66-column 10:line 3)** that executes

in the print system that is representative of method claim 31. Although not specifically mentioned, the

system inherently includes a computer readable memory medium to storing the program, otherwise the

program would not be available for use.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 12, 19, 24, 29, 35 & 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckley et al. (US 6,798,530) & Tomory (US 5,815,764).

Regarding claim 7, Buckley et al., teach system according to claim 1 and further teach **the use of the**

graphical user interface that generates the description information of the meta-printer, which is

compiled by accessing the printer definitions of all the printers in the meta-printer, and summing

their functions and types in the meta-printer (fig 5, fig 6, & column 6:line 63-column 7:line 20).

Buckley et al., do not teach wherein said generation means determines the number of the output bins of

the virtual printing apparatus, by adding the respective numbers of the output bins of the plural printing

apparatus, although Buckley et al., teach compiling printer functions from each printer and collectively

defining a meta-printer.

However, Tomory teaches a printer with output bin designation **(column 12:lines 43-63).**

Accordingly, it would have been obvious to one skilled in the art to have used the output bin

selection taught by Tomory in the system taught by Buckley et al. The bin selection is advantageous in

the system taught by Buckley et al., because, if included on all printers in the meta-printer, it provides a

method to clearly distinguish what bins the documents are located in. In addition, **(column 11:line 65-**

column 12:line 10) the server in the bin designation system taught by Tomory reminds the client where to remove his or her print job.

Regarding claim 12, Buckley et al., teach a system according to claim 11, but do not teach the system further comprising informing means for informing how the print data are dispersed, from the server apparatus to the client apparatus.

However, Tomory teaches a system server that automatically generates messages sent back to the client/user that lets the user know where the print data are dispersed **(column 11:line 65-column 12:line 10)**.

Accordingly, it would have been obvious to one skilled in the art to have used the output bin selection and notification taught by Tomory in the system taught by Buckley et al., because it notifies the user where to remove his or her print job.

Claim 19 recites identical features as claim 7 except claim 19 is a method claim. Thus, arguments similar to that presented above for claim 7 is equally applicable to claim 19.

Claim 24 recites identical features as claim 12 except claim 24 is a method claim. Thus, arguments similar to that presented above for claim 12 is equally applicable to claim 24.

Regarding claim 29, Buckley et al., teach a program **(column 9:line 66-column 10:line 3)** which is representative of method claim 24.

Regarding claim 35, Buckley et al., teach a system according to claim 34, but do not teach the system further comprising informing means for informing how the print data are dispersed, from the information processing apparatus to the external apparatus.

However, Tomory teaches a system server that automatically generates messages sent back to the client/user that lets the user know where the print data are dispersed **(column 11:line 65-column 12:line 10)**.

Accordingly, it would have been obvious to one skilled in the art to have used the output bin selection and notification taught by Tomory in the system taught by Buckley et al., because it notifies the user where to remove his or her print job.

Regarding claim 40, Buckley et al., teach a program **(column 9:line 66-column 10:line 3)** which is representative of the apparatus claim 35.

Claims 10 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckley et al. (US 6,798,530) & Srivivasan (US 6,452,689).

Regarding claim 10, Buckley et al., teach a system according to claim 9, but do not teach wherein said sheet processing function is a stapling function, a book binding function, a folding function, a punching function, a gluing function, an enveloping function or a private box delivery function.

However, Srivivasan teaches printing instructions that include not only two-sided printing, but include a three hole punching function, and a binding function **(column 5:lines 1-13)**.

Accordingly, it would have been obvious to one skilled in the art to have used the binding and hole punching options taught by Srinivasan in the system taught by Buckley et al., because the functions allow for additional virtual/meta-printer functionality, which increases its usability.
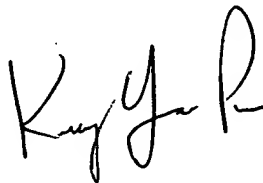
Claim 22 recites identical features as claim 10 except claim 22 is a method claim. Thus, arguments similar to that presented above for claim 10 is equally applicable to claim 22.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle Pendergrass whose telephone number is **(571) 272-7438**. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on **(571) 272-7440**.

KING Y. POON
PRIMARY EXAMINER